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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,476

02/20/2004

Tetsuo Ikegame

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7472

1933 7590 10/10/2007
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER

DINH, JACK

ART UNIT

PAPER NUMBER

2873

MAIL DATE

DELIVERY MODE

10/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,476

Applicant(s)

IKEGAME, TETSUO

Examiner

Jack Dinh

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 11-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/021,652.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: DETAILED ACTION

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being unpatentable by Ikegame et al. (US Patent 6,373,811).

Regarding claim 1, Ikegame (figure 10B) is interpreted as disclosing an optical element drive mechanism comprising a movable portion **112e** including at least an optical element having a reflecting surface (not shown), a support member **112d** for supporting the movable portion rotatably with respect to a fixing member, and a drive mechanism including at least a coil **114g** and a magnet **112f** for driving the movable portion, wherein an end surface of the magnet, at which a magnetic pole is provided, is substantially parallel to the reflecting surface of the movable portion (see figure).

Regarding claim 2, Ikegame (figure 10B) is interpreted as further disclosing that the coil includes an effective portion which generates rotation torque, and a magnetic field which is

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substantially in parallel with the reflecting surface of the movable portion functions on the effective portion of the coil.

Regarding claim 3, Ikegame (figure 10B) is interpreted as further disclosing a plurality of magnetic poles are provided on the end surface of the magnet (see figure).

Regarding claim 4, Ikegame (figure 10B) is interpreted as further disclosing that the plurality of magnetic poles provided on the end surface of the magnet are opposite to the movable portion (see figure).

Regarding claim 5, Ikegame (figure 10B) is interpreted as further disclosing that the coil includes an effective portion which generates rotation torque, and the effective portion of the coil is positioned at a boundary portion between respective magnetic poles of the magnets.

Regarding claim 6, Ikegame (figure 10B) is interpreted as further disclosing that the coil **114g** is attached to the movable portion **112e**.

Regarding claim 7, Ikegame (figure 10B) is interpreted as further disclosing that the movable portion **112e** comprises the reflecting surface (not shown) on a first side and the coil **114g** on a second side that is opposite to the first side.

Regarding claims 8-10, Ikegame is interpreted as disclosing all the claimed limitations except that the movable portion comprising an array of plurality of movable portions. However, positioning one movable portion next to another to create an array of plurality of movable portions to achieve multiple effect would have been an obvious modification to one of ordinary skill in the art. In addition, creating an integral support member for the plurality of movable portions and providing a magnet generated enough magnetic flux to drive the plurality of movable portions would have been obvious and within the knowledge of one skilled in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an array of plurality of the movable portions for the purpose of accommodating larger switching system.

Response to Arguments

2. Applicant's amendment and arguments filed 09/17/07 have been fully considered but they are not persuasive.

The Prior Art Rejection

Regarding claim 1, the Applicant argues that "since the end surface of the magnet is arranged parallel to the reflecting surface of the mirror, the mirror 65, the magnet 63 and the housing 62 can be stacked along one direction, such that easy assembly of the device is facilitated". This is not found persuasive because such language representing the geometric configuration is not recited in the claim. The Applicant further argues that Ikegame et al. shows that the end surfaces of the magnets at which the magnetic poles are provided is perpendicular to the reflecting surface of the mirror. It is understood by one ordinary skill in the art that the

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magnetic field showing the direction of the polarity surrounds the magnet. In other words, the magnetic field showing the direction of the polarity can be detected on any close proximity to the magnet. Therefore, the left and right surface of 112f of Ikegame's figure 10B would detect a magnetic pole, and hence the magnetic pole would be provided. Therefore, the prior art still reads on the broad language of the claim.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Dinh whose telephone number is 571-272-2327. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L. Mack, can be reached at 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jack Dinh
05/10/07


RICKY MACK
SUPERVISORY PATENT EXAMINER